# The high-energy view of jets and transients

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Mini-grant (14 keuro)

Research activities in the field of high-energy studies of jets and transients:
I. Extragalactic jets
II. Radio galaxy evolution
III. Microquasars & transients

## Richiesta collegata alle seguenti Schede

| Titolo Scheda | Acronimo | Coordinatore |
|---|---|---|
| JEtted AGN at High energies | JEAH | paola.grandi |
| Osservazioni radio single-dish e VLBI di sistemi binari X nel contesto di osservazioni simultanee multi-frequenza | MQR | elise.egron |
| Simulazioni numeriche di getti da AGN | 3D-JETS | paola.rossi |
| The X-ray sky seen by eROSITA | eROSITA | marcella.brusa |

# Status of the project (11/2023)

## Results & ongoing work:

- Analysis and interpretation of high-energy datasets (Chandra, XMM, Nustar) of jetted sources/ transients.
- Successful follow-up proposals (radio & X-ray facilities).

## Conferences:

- Co-chair workshop ‘Bologna& Friends: radio galaxies’ March 2023, Bologna (https://indico.ict.inaf.it/event/2300/)
- Contributed talk “The bright X-ray jet in RGB J1512+020A: evidence for a third radiative component?” 20th HEAD meeting, Hawai’i (USA), 26-30 March 2023;
- Invited talk “Extragalactic jets: the high-energy view” EAS2023, Krakow (Poland), 10-14 July 2023;
- Contributed talk “The z=6.18 radio quasar CFHQS J142952+544717 under Chandra X-ray lens”+co-chair of a discussion session AGN on the Beach, Tropea (Italy), 10-15 September 2023.

## Publications:

- “The extremely X-ray luminous radio-loud quasar CFHQS J142952 + 544717 at z = 6.18 under Chandra high-angular resolution lens” G.Migliori et al., MNRAS,524,1087;
- “Roaring to softly whispering: Persistent X-ray emission at the location of the Fast Blue Optical Transient AT2018cow ~3.7 yrs after discovery and implications on accretion-powered scenarios” G.Migliori et al., ApJL under review;
- “Investigating X-ray Emission in the GeV-emitting Compact Symmetric Objects PKS 1718-649 and TXS 1146+596” E.Bronzini, G.Migliori et al., submitted to A&A (based on Bronzini’s Master Thesis).

## Grant:

~40% of the grant spent in 2023 mainly for conference travels.

# Future & Critical points

## Future:

- Analysis and interpretation of high-energy datasets (Chandra, XMM, Nustar) of jetted sources/ transients: focus on high-energy studies of radio galaxy hotspots + young radio sources;
- Ongoing collaboration with INAF-AOTO group working on simulations;
- Follow-up proposals;
- Attendance of national/international conferences (IAU, national AGN meeting..) + collaboration visits

## Critical issues:

- Cost of conferences has significantly increased since the application time;
- Publication policy for some journal has changed (unforeseen expenses);
- Not easy to invite collaborators from abroad;
- The timeline for the evaluation and funding process could be more defined to allow better planning.

INAF Mini-grant is a precious resource to
promote research activity, dissemination of the results, scientific collaborations.